

U.S. Patent Application No. 09/736,820
Request for Reconsideration dated March 28, 2005
Reply to Office Action dated December 29, 2004

REMARKS/ARGUMENTS

Reconsideration and continued examination of the above-identified application are respectfully requested.

Applicants Record of Substance of Interview

Applicant wishes to thank Examiner Rhee for extending the courtesy of a personal interview of the application with Applicant's representative, Ralph Webb (Reg. No. 33,047) on March 16, 2005. During the interview, Fricke et al., U.S. Patent No. 6,227,759, which was applied as the primary reference against all of the claims, was discussed. In particular, it was pointed out to the Examiner that contrary to what was alleged in the Office Action, Fricke et al. does not teach or suggest a floor surface covering comprising polymeric planks that are joined by chemical welding. Specifically, the types of welding that are mentioned in Fricke et al., such as, for example, at col. 3, lines 18 - 33 are not chemical welding.

In view of the items that were discussed in the interview, Applicant submits the following remarks.

Rejection of claims 1, 5 - 6 and 22 under 35 U.S.C. §102(b) over Fricke et al.

At page 3 of the Office Action, the Examiner rejected claims 1, 5 - 6 and 22 under 35 U.S.C. §102(e) as being anticipated by Fricke et al. (U.S. Patent No. 6,227,759). The Examiner alleged that Fricke et al. shows a floor surface (col. 1, line 11 - 12) comprising two or more polymeric flooring planks having edges and connected by chemical welding and wherein the welding agent is present on at least one of the planks, and wherein the chemical agent comprises

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at least one solvent that at least bonds the edges of the plank. The Examiner further alleged that Fricke et al. shows that the chemical welding agent is present on at least each edge (figure 2, number 6a) of each thermoplastic plank connected together to another thermoplastic plank (figure 2, number 1a, 1b). The Examiner further alleged that Fricke et al. shows that the chemical welding agent is present on two opposite edges (figure 2, number 6a) and that the polymeric flooring plank is in the shape of a tile (figure 2, number 1a). For the following reasons, this rejection is respectfully traversed.

Contrary to what is alleged by the Examiner, Fricke et al. does not teach or suggest a floor surface comprising two or more polymeric flooring planks having edges and connected by chemical welding. In particular, Fricke et al. does not teach or suggest chemical welding at all. The Examiner is clearly in error in alleging that specific passages of Fricke et al. show chemical welding (specifically, col. 2, line 38 - 39, col. 3, lines 21 - 22 and figure 2 and 3 of Fricke et al.) because these passages do not mention chemical welding at all. Chemical welding is not mentioned anywhere in Fricke et al. At col. 3, lines 18 - 32, Fricke et al. mentions tack welding, welding using a plastic welder, and injection welding, but all of these are methods of thermal welding, that is, methods in which the material to be welded is melted by the application of heat and not by the application of a chemical welding agent that comprises at least one solvent that bonds the edges of the planks. As discussed in the present specification on page 1, lines 16 - 21, traditional methods of adjoining, including performing hot welding, lead to a product that is not pleasing to the user. The unsatisfactory aesthetic results produced by thermal welding are noted in Fricke et al. which states that regardless of the [thermal] welding technique, the welding step typically leaves a slight rise above the welded surface, which must be removed by planing,

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sanding or both (see col. 5, lines 41 - 44). (This statement would apply only to thermal welding, since Fricke et al. does not teach or suggest chemical welding). Therefore, it is clear from the teachings of the present specification and the description of thermal welding in Fricke et al. that a floor surface covering in which polymeric flooring planks are joined by chemical welding is a physically different product from a product that is joined by thermal welding. Accordingly, claims 1, 5 - 6 and 22 are not anticipated by Fricke et al. and the rejection under 35 U.S.C. §102(e) should be withdrawn.

Rejection of claims 2 - 4 under 35 U.S.C. §103(a) over Fricke et al.

At page 4 of the Office Action, the Examiner rejected claims 2 - 4 under 35 U.S.C. §103(a) as being obvious over Fricke et al. (Apparently, this is intended to be a rejection over Fricke et al. in view of Peralt Anstalt, GB 1,178,565, since the Examiner applies Peralt Anstalt as a secondary reference in the rejection.) The Examiner alleged that Fricke et al. discloses the floor surface described above, but fails to disclose that the chemical welding agent consists of tetrahydrofuran. The Examiner alleged that Peralt Anstalt teaches two polymeric planks with a bonding agent of tetrahydrofuran for connecting two sheets by temporarily dissolving and respectively plasticizing the plastics material so that a connection similar to a welded connection is obtained under pressure (col. 1, lines 25 - 30). The Examiner took the position that it would have been obvious to provide Fricke et al. with a bonding agent of tetrahydrofuran for connecting two sheets by temporarily dissolving and respectively plasticizing the plastics material so that a connection similar to a welded connection is obtained under pressure. For the following reasons, this rejection is respectfully traversed.

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As discussed above, Fricke et al. does not teach or suggest any form of chemical welding. Therefore, it would not have been obvious to use tetrahydrofuran as a chemical welding agent in Fricke et al., since Fricke et al. does not teach or suggest chemical welding at all.

Moreover, the differences between the present invention and the product and method set forth in Peralt Anstalt have been thoroughly discussed in Applicant's previous responses. As discussed, for example, in the Amendment filed on October 4, 2004, Peralt Anstalt is directed to exterior panels that are used in roofing applications and that are joined in an overlapping configuration. By contrast, in the claimed invention, planks of a flooring surface are joined edge-to-edge, with no overlap of any kind, to produce a flat surface. The present wording of the claims does not encompass the overlapping configuration found in Peralt Anstalt. The claimed invention relates to floor surface covering and the claims specifically mention the welding agent being applied to the "edges" of the planks, as in claim 1. Furthermore, one skilled in the art would not overlap a floor surface covering.

A person skilled in the art in considering the joining of polymeric flooring planks to form a floor surface covering would be expected to consider the types of stresses, such as foot traffic and janitorial activities to which a floor surface covering would be exposed to and would be concerned with ensuring that the overall floor remains intact, as mentioned on page 2, lines 13 - 15 of the present specification. Clearly, one skilled in the art would not combine Fricke et al. with Peralt Anstalt. One relates to a skating floor and the other relates to roofing shingles. The methods are clearly different. Further, Fricke et al. does not relate to chemical welding and so it is not clear how Peralt Anstalt can be combined with Fricke et al. for many reasons.

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Moreover, a person skilled in the art who was seeking to join polymeric flooring planks to form a floor surface covering would not look to the teachings of Peralt Anstalt et al., which, as discussed above, relates to exterior panels that are used in roofing applications and that are joined in an overlapping configuration. It would be recognized that the forces and stresses to which a floor covering is subjected are not the same as the forces and stresses to which a roof is subjected; therefore, the teachings of a suitable bonding material and method for joining together overlapping plastic sheets on a roof would not be relevant to joining polymeric flooring planks to form a floor surface covering.

Accordingly, claims 2 - 4 are not obvious over Fricke et al., or over Fricke et al. in combination with Peralt Anstalt, and the rejection under 35 U.S.C. §103(a) should be withdrawn.

Rejection of claim 19 under 35 U.S.C. §103(a) over Fricke et al. in view of Park et al.

At page 5 of the Office Action, the Examiner rejected claim 19 under 35 U.S.C. §103(a) as being unpatentable over Fricke et al. in view of Park et al. (U.S. Patent No. 5,837,343). The Examiner alleged that Fricke et al. discloses a floor surface comprising two or more polymeric flooring planks having edges, where the planks are connected to each other by chemical welding, wherein the welding agent is present on at least one of the planks, and wherein the chemical agent comprises at least one solvent that at least bonds the edges of the plank. The Examiner acknowledged that Fricke et al. fails to disclose splines located between at least a portion of the polymeric planks. The Examiner alleged that Park et al. teaches a polymeric spline located between a portion of the polymeric planks (figure 2, number 46) for the purpose of holding the panels in precise vertical alignment (col. 5, lines 50-51). The Examiner took the position that it

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would have been obvious to provide Fricke et al. with splines located between at least a portion of the polymeric planks, wherein at least a portion of the planks and splines are connected to each other by a chemical welding agent comprising at least one solvent that chemically welds at least the spline and plank together, wherein the chemical welding agent is applied to at least one of the edges of at least one of the individual planks in order to hold the panels in precise vertical alignment (col. 5, lines 50 - 51) as taught by Park et al. For the following reasons, this rejection is respectfully traversed.

As discussed above, the Examiner is clearly in error in alleging that Fricke et al. teaches or suggests chemical welding. Fricke et al. does not teach or suggest any form of chemical welding. Likewise, Park et al. does not teach or suggest chemical welding. Park et al. explicitly states that the segments of its composite structure are assembled without nails or glue (see col. 5, lines 49 - 50 of Park et al.), thereby implicitly teaching away from any other means of bonding between its segments other than its described groove and spline assembly. Therefore, Park et al. does not overcome the failure of Fricke et al. to teach chemical welding, which is an explicit limitation of claim 19. Accordingly, claim 19 is not obvious over Fricke et al. in view of Park et al., and the rejection under 35 U.S.C. §103(a) should be withdrawn.

Rejection of claim 20 under 35 U.S.C. §103(a) over Fricke et al. in view of Park et al and in further view of Peralt Anstalt

At page 6 of the Office Action, the Examiner rejected claim 20 under 35 U.S.C. § 103(a) as being unpatentable over Fricke et al. in view of Park et al. and in further view of Peralt Anstalt (GB 1,178,565). The Examiner alleged that Fricke et al. and Park et al. disclose the floor surface

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described above. The Examiner acknowledged that Fricke et al. fails to disclose that the chemical welding agent consists of tetrahydrofuran. The Examiner alleged that Peralt Anstalt teaches two polymeric planks with a bonding agent of tetrahydrofuran for the purpose of connecting two sheets by temporarily dissolving and respectively plasticizing the plastic material so that a connection similar to a welded connection is obtained under pressure (col. 1, lines 25-30). The Examiner took the position that it would have been obvious to provide Fricke et al. with a bonding agent of tetrahydrofuran in order to connect two sheets by temporarily dissolving and respectively plasticizing the plastic material so that a connection similar to a welded connection is obtained under pressure (col. 1, lines 25-30) as taught by Peralt Anstalt. For the following reasons, this rejection is respectfully traversed.

As discussed above, the Examiner is clearly in error in alleging that Fricke et al. teaches or suggests chemical welding, which is an explicit limitation of claim 19, upon which claim 20 depends. Fricke et al. does not teach or suggest any form of chemical welding. Likewise, as discussed above, Park et al. does not teach or suggest chemical welding and implicitly teaches away from any other means of bonding between its segments other than its described groove and spline assembly. Therefore, Park et al. does not overcome the failure of Fricke et al. to teach chemical welding, which is an explicit limitation of claim 19.

Moreover, as discussed above, since Fricke et al. does not teach chemical welding, the reference is not combinable with Peralt Anstalt, which teaches particular solvents for joining plastic sheets such as overlapping exterior panels for roofing applications. Accordingly, claim 20 is not obvious over Fricke et al. in view of Park et al. and in further view of Peralt Anstalt, and the rejection under 35 U.S.C. §103(a) should be withdrawn.

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Rejection of claim 23 under 35 U.S.C. §103(a) over Fricke et al. in view of Park et al

Also at page 6 of the Office Action, the Examiner rejected claim 23 under 35 U.S.C. § 103(a) as being unpatentable over Fricke et al. in view of Park et al. The Examiner alleged that Fricke et al. discloses the floor surface described above. The Examiner acknowledged that Fricke et al. fails to disclose that the polymeric flooring plank has a polymeric core with a laminate affixed on the surface of the core. The Examiner alleged that Park et al. teaches a polymeric flooring plank having a polymeric core (figure 1, number 14) for the purpose of providing an improved composite structure presenting low friction properties that can incorporate into a surface and provide high dimensional stability and durability, together with a friction reducing property (col. 1, lines 51-55). The Examiner took the position that it would have been obvious to provide Fricke et al. with a laminate affixed on the surface of the core in order to provide a composite structure presenting low friction properties that can incorporate into a surface and provide high dimensional stability and durability, together with a friction reducing property (col. 1, lines 51-55) as taught by Park et al. For the following reasons, this rejection is respectfully traversed.

Claim 1, upon which claim 23 depends, requires chemical welding. As discussed above, the Examiner is clearly in error in alleging that Fricke et al. teaches chemical welding. Neither Fricke et al. nor Park et al. teach or suggest any form of chemical welding. Park et al. explicitly states that the segments of its composite structure are assembled without nails or glue, thereby implicitly teaching away from any other means of bonding between its segments other than its described groove and spline assembly. Therefore, Park et al. does not overcome the failure of

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Fricke et al. to teach chemical welding.

Accordingly, claim 23 is not obvious over Fricke et al. in view of Park et al., and the rejection under 35 U.S.C. §103(a) should be withdrawn.

Rejection of claim 27 under 35 U.S.C. §103(a) over Fricke et al. in view of Andrews et al

At page 7 of the Office Action, the Examiner rejected claim 27 under 35 U.S.C. § 103(a) as being unpatentable over Fricke et al. in view of Andrews (U.S. Patent No. 2,495,680). The Examiner alleged that Fricke et al. discloses the floor surface described above. The Examiner acknowledged that Fricke et al. fails to disclose a welding agent that comprises at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank. The Examiner alleged that Andrews et al. teaches a welding agent that comprises at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank (col. 3, lines 41-46) for the purpose of developing a seam with strength equal to the strength of the plastic sheets (col. 1, lines 23-24). The Examiner took the position that it would have been obvious to provide Fricke et al. with a welding agent that comprises at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank in order to develop a seam with strength equal to the strength of the plastic sheets (col. 1, lines 23-24) as taught by Andrews et al. For the following reasons, this rejection is respectfully traversed.

As discussed above, the Examiner is clearly in error in alleging that Fricke et al. teaches chemical welding, which is an explicit limitation of claim 1, upon which claim 27 depends. Fricke et al. does not teach or suggest any form of chemical welding. Therefore, Fricke et al. is not combinable with Andrews et al., which teaches an apparatus for joining flexible sheets of

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vinylite resin using particular solvents instead of cement for creating seams in the plastic sheets.

As discussed above, a person skilled in the art would not be motivated to modify the teachings of Fricke et al. to provide planks joined by chemical welding. Fricke et al. relates to a plastic skating surface made up of large plastic sheets (32 feet by 8 feet in the preferred embodiment; see col. 2, line 48 of Fricke et al.). Fricke et al. states that the plastic sheets are held in place and held together because of their weight and that the welds are useful primarily to provide surface continuity rather than for holding adjacent surfaces together (see col. 5, lines 44 - 50). Therefore, a person skilled in the art who was seeking to join polymeric flooring planks to form a floor surface covering would not look to the teachings of Fricke et al. as being relevant to connecting the flooring planks to each other.

Moreover, a person skilled in the art who was seeking to join polymeric flooring planks to form a floor surface covering would not look to the teachings of Andrews et al., which, as discussed above, relates to flexible plastic sheets for uses such as garments and receptacles and the like (see col. 1, line 3 of Andrews et al.). It would be recognized that the forces and stresses to which a floor covering is subjected are not the same as the forces and stresses to a flexible sheet used as a garment or receptacle; therefore, the teachings of a suitable bonding material and method for joining together overlapping flexible plastic sheets for a garment or receptacle would not be relevant to joining polymeric flooring planks to form a floor surface covering.

Accordingly, claim 27 is not obvious over Fricke et al. in view Andrews et al., and the rejection under 35 U.S.C. §103(a) should be withdrawn.


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CONCLUSION

In view of the foregoing remarks, the applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

If there are any other fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,


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